REMARKS

This is a full and timely response to the outstanding final Office Action mailed August 23, 2005. Reconsideration and allowance of the application and pending claims 20, 23-29, 32-35, 38-44, and 46-48 are respectfully requested.

I.   **Claim Rejections - 35 U.S.C. § 103(a)—Independent Claims 20 and 29**

A.   **Statement of the Rejection**

Claims 20, 23-29, 32, and 33 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Davis et al.* ("*Davis*," U.S. Pat. No. 6,701,449), in view of *Talagala et al.* ("*Talagala*," U.S. Pat. No. 6,732,289), in view of *DeKoning et al.* ("*DeKoning*," U.S. Pat. No. 5,588,110), and *Duso et al.* ("*Duso*," U.S. Pat. No. 5,987,621). Applicant respectfully traverses this rejection.

B.   **Discussion of the Rejection**

As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a proper case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Accordingly, to make a proper case for obviousness, there must be a prior art teaching or established knowledge that would suggest to a person having ordinary skill in the pertinent art to fill the voids apparent in the applied reference. It is respectfully asserted that no such case has been made in the outstanding Office Action.

Independent Claim 20

Claim 20 recites (with emphasis added):

> 20.   A storage system, comprising:
> *a first iSCSI controller operable to receive a SCSI I/O request over a TCP/IP network*; and
> *a second iSCSI controller* coupled to the first iSCSI controller, wherein the first iSCSI controller is configured to copy the SCSI I/O request to memory associated with the second iSCSI controller *and acknowledge to a host that the SCSI I/O request has been committed*, and wherein responsive to detecting a failure of the first iSCSI controller, if the second iSCSI controller determines that the SCSI I/O request has been committed but not completed, the second iSCSI controller assumes the network address of the first iSCSI controller, retrieves the copy of the SCSI I/O request from the memory, and completes the SCSI I/O request.

Applicant respectfully submits that the combination of references does not disclose, teach, or suggest at least the emphasized claim features. It does not appear that the Office Action has properly addressed the issue of iSCSI features. As detailed in the last response (dated 6/3/05) under Section I entitled "Examiner Interview," the last paragraph of that section (page 10) states the following:

> Mr. Puente advised that Davis teaches SCSI and TCP/IP in column 3, and that he would need to review Davis and consult with other Examiners as to the strength of the current rejection as it relates to this feature.

The final Office Action mailed 8/23/05 simply refers to Figure 1 of *Davis* for allegedly anticipating *first* and *second iSCSI controllers*, as recited in independent claim 20. However, neither Figure 1 nor the col. 3 section cited by the Examiner discloses *iSCSI* and the related features. Referring to the Examiner's comment (see Examiner Interview section in prior response) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a <u>fiber channel network</u>, not over a "TCP/IP network."

For instance, col. 3, lines 11-15 provides as follows:

> Although a fiber channel network is depicted as one way of connecting the SCMs 108, 110 to the storage pool 112, the connection may be accomplished using any form of data network protocol such as SCSI, HIPPI, SSA and the like.

Column 3, lines 48-55 discuss TCP/IP, and provide as follows:

> The host network 130 is the medium through which the storage system communicates with the clients 104 and 106. The SCMs 108, 110 provide network services such as NFS and HTTP to the clients 104, 106 that reside on the host network 130. The host network 130 runs network protocols through which the various services are offered. These may include TCP/IP, UDP/IP, ARP, SNMP, NFS, CIFS, HTTP, NDMP, and the like.

In other words, the host may communicate with <u>clients</u> through TCP/IP mechanisms, but such communication does not involve SCSI commands, the latter which occur in *Davis* over a fiber channel network coupled to the storage device as described above.

Referring to Figure 1 of *Davis*, it is noted that one port of the network appliance (*e.g.*, SCMA 108) appears to communicate with a LAN 130, and the other port communicates with a fiber channel 114. To meet, for instance, the claim feature *a first iSCSI controller operable to receive a SCSI I/O request over a TCP/IP network*, the SCMA 108 would need to (1) be an iSCSI controller, and (2) the SCMA 108 would need to be operable to receive a SCSI I/O request over the LAN 130 operating under TCP/IP. Neither of these conditions are met by Figure 1. Instead, SCSI I/O requests appear to be received over the fiber channel network, which is not TCP/IP. Further, the cited art of record also fails to remedy these deficiencies.

Thus, Applicant respectfully submits that the combination of references fails to disclose, teach, or suggest at least the emphasized claim features, and respectfully requests that the rejection be withdrawn.

Further, Applicant respectfully submits that the proposed combination of references do not disclose, teach, or suggest a "first iSCSI controller is configured to copy the SCSI I/O

request to memory associated with the second iSCSI controller *and acknowledge to a host that the SCSI I/O request has been committed*," as recited in independent claim 20. The Office Action cites *Duso* and alleges that "Duso discloses acknowledging to a host that the request has been committed." Then the Office Action states that "Davis and Talagala is concerned with failover and acknowledging to a host that the request has been committed, as per teachings of Duso, enables the host to know which I/O operation to retry when problems occur (see column 1, lines 55-60)." Applicant respectfully submits that such an analysis ignores the requirement under MPEP 2141.02 (no emphasis added) that "[I]n determining the differences between the prior art and the claims, the question under 35 U.S. C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." Claim 20 indeed requires that the "first iSCSI controller...*acknowledge to a host*," whereas *Duso* teaches that the storage system (or file server), not the controller, acknowledge to a host.

Additionally, Applicant respectfully submits that the asserted motivation to combine is flawed. For instance, *Talagala* teaches the following (col. 3, lines 59-66):

> Once the ownership has been granted to the requesting controller, the FST will retrieve a list of recent requests (e.g. write/read access requests) that have been received from the previous owner 304-1 and committed to the disk drive and transmit them to the current owner 304-2. The list of recent requests that have been committed to the disk drive is used by the new owner (e.g., controller 304-2) to complete the uncommitted requests correctly.

In other words, *Talagala* appears to use cached requests when problems occur, not a host-retry operation. This operation is clearly in contrast to enabling "the host to know which I/O operation to retry." Thus, Applicant does not understand the reasoning behind combining *Duso* with *Talagala* and respectfully requests clarification.

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For at least the above described reasons, Applicant respectfully submits that the combination of references fails to disclose, teach, or suggest at least the emphasized claim features, and respectfully request that the rejection to independent claim 20 be withdrawn.

Because independent claim 20 is allowable over the cited art of record, dependent claims 23-28 are allowable as a matter of law for at least the reason that the dependent claims 23-28 contain all elements of their respective base claim. See, *e.g., In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Independent Claim 29

Claim 29 recites (with emphasis added):

> 29.   A storage method, comprising:
> *receiving at a first TCP/IP network address a SCSI I/O request*;
> copying the SCSI I/O request;
> *storing the copy of the SCSI I/O request at a second TCP/IP network address* and acknowledging to a host that the SCSI I/O request has been committed;
> detecting whether the SCSI I/O request can be processed at the first TCP/IP network address;
> responsive to detecting that the SCSI I/O request cannot be processed at the first TCP/IP network address, determining whether the SCSI I/O request has been committed but not completed;
> responsive to determining that the SCSI I/O request has been committed but not completed, assuming the first TCP/IP network address from the second TCP/IP network address;
> retrieving the copy of the SCSI I/O request; and
> writing or reading data corresponding to the copy of the SCSI I/O request to or from a storage system.

Applicant respectfully submits that the combination of references does not disclose, teach, or suggest at least the emphasized claim features. Similar to the explanation above, neither Figure 1 nor the col. 3 section cited by the Examiner disclose receiving or storing *SCSI* I/O requests at a first and second *TCP/IP network address*, respectively. Referring to the Examiner's comment (see Examiner Interview section in prior response) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a <u>fiber channel</u>

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network, not over a "TCP/IP network." Further, the host in *Davis* may communicate with

clients through TCP/IP mechanisms, but such communication does not involve SCSI

commands or requests, which occur in *Davis* over a fiber channel network coupled to the

storage device as described above.

Referring to Figure 1 of *Davis*, it is noted that one port of the network appliance (*e.g.*,

SCMA 108) appears to communicate with a LAN 130, and the other port communicates with a

fiber channel 114. To meet, for instance, the claim feature *receiving at a first TCP/IP network*

address a SCSI I/O request, the SCMA 108 would need to (1) be an iSCSI controller, and (2)

the SCMA 108 would need to be operable to receive a SCSI I/O request over the LAN 130

operating under TCP/IP. Neither of these conditions are met by Figure 1. Instead, SCSI I/O

requests appear to be received over the fiber channel network, which is not TCP/IP. Further, the

cited art of record also fails to remedy these deficiencies.

For at least the above described reasons, Applicant respectfully submits that the

combination of references fails to disclose, teach, or suggest at least the emphasized claim

features, and respectfully request that the rejection to independent claim 29 be withdrawn.

Because independent claim 29 is allowable over the cited art of record, dependent

claims 32-33 are allowable as a matter of law.

II.   Claim Rejections - 35 U.S.C. § 103(a)—Independent Claim 34

Claim 34 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over

Davis in view of *Talagala*. It is respectfully asserted that a proper case of obviousness has not

been established in the outstanding Office Action. Thus, Applicant respectfully traverses this

rejection.

Independent Claim 34

Claim 34 recites (with emphasis added):

34.   A storage system, comprising:
means for detecting whether a SCSI I/O request can be processed at a first TCP/IP network address;
responsive to detecting that the SCSI I/O request cannot be processed at the first TCP/IP network address, means for determining whether the SCSI I/O request has been committed;
responsive to determining that the SCSI I/O request has been committed, means for assuming the first TCP/IP network address from a second TCP/IP network address;
means for retrieving a copy of the SCSI I/O request; and
means for writing or reading data corresponding to the copy of the SCSI I/O request to or from a storage system.

Applicant respectfully submits that the combination of references does not disclose, teach, or suggest at least the emphasized claim features. Similar to the explanation above, neither Figure 1 nor the col. 3 section cited by the Examiner discloses *means for detecting whether a SCSI I/O request can be processed at a first TCP/IP network address*. Referring to the Examiner's comment (see Examiner Interview section in prior response) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a fiber channel network, not over a "TCP/IP network." Further, the host in *Davis* may communicate with clients through TCP/IP mechanisms, but such communication does not involve SCSI commands or requests, which occur in *Davis* over a fiber channel network coupled to the storage device as described above.

Referring to Figure 1 of *Davis*, it is noted that one port of the network appliance (*e.g.*, SCMA 108) appears to communicate with a LAN 130, and the other port communicates with a fiber channel 114. To meet, for instance, the claim feature *means for detecting whether a SCSI I/O request can be processed at a first TCP/IP network address*, the SCMA 108 would need to (1) be an iSCSI controller, and (2) the SCMA 108 would need to be operable to receive

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a SCSI I/O request over the LAN 130 operating under TCP/IP. Neither of these conditions are met by Figure 1. Instead, SCSI I/O requests appear to be received over the fiber channel network, which is not TCP/IP. Further, the cited art of record also fails to remedy these deficiencies.

For at least the above described reasons, Applicant respectfully submits that the combination of references fails to disclose, teach, or suggest at least the emphasized claim features, and respectfully request that the rejection to independent claim 34 be withdrawn.

III.   Claim Rejections - 35 U.S.C. § 103(a)—Dependent Claim 48

Claim 48 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Davis* in view of *Talagala*, and in further view of *Duso*. In that *Davis* in view of *Talagala* fail to disclose, teach, or suggest at least the emphasized claim feature of independent claim 34, and *Duso* fails to remedy these deficiencies, it is respectfully asserted that claim 48, which contains the features of independent claim 34, is allowable as a matter of law over the combination of references. Thus, Applicant respectfully requests that the rejection to claim 48 be withdrawn.

IV.   Claim Rejections - 35 U.S.C. § 103(a)—Independent Claim 35

Claims 35 and 38-44 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Davis* in view of *Talagala* and *DeKoning*. It is respectfully asserted that a proper case of obviousness has not been established in the outstanding Office Action. Thus, Applicant respectfully traverses this rejection.

Independent Claim 35

Claim 35 recites (with emphasis added):

35.   A network controller for use on a network, comprising:
a communication port configured to receive status information and a copy of a SCSI I/O request from a second network controller and a SCSI I/O request over a TCP/IP network;
a memory configured to store the copy of the SCSI I/O request; and
logic configured to detect a failure of the second network controller and determine whether the SCSI I/O request has been committed by the second network controller, wherein responsive to determining that the SCSI I/O request has been committed, the logic further configured to assume the network address of the second network controller, retrieve the copy of the SCSI I/O request from the memory, and write or read data corresponding to the copy of the SCSI I/O request to or from a storage system.

Applicant respectfully submits that the combination of references does not disclose, teach, or suggest at least the emphasized claim features. The Office Action correctly states that *Davis* fails to disclose the emphasized claim features. However, the Office Action incorrectly alleges that *DeKoning* remedies these deficiencies. Nothing in *DeKoning* or any of the other art of record discloses, teaches, or suggests *a communication port configured to receive status information and a copy of a SCSI I/O request from a second network controller and a SCSI I/O request over a TCP/IP network*, as recited in independent claim 35.

For at least the above described reasons, Applicant respectfully submits that the combination of references fails to disclose, teach, or suggest at least the emphasized claim features, and respectfully request that the rejection to independent claim 35 be withdrawn.

Because independent claim 35 is allowable over the cited art of record, dependent claims 38-44 are allowable as a matter of law.

V.   Claim Rejections - 35 U.S.C. § 103(a)—Independent Claims 46 and 47

Claims 46 and 47 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable

over *Davis* in view of *Judd et al.* ("*Judd*," U.S. Pat. No. 5,768,623). It is respectfully asserted

that a proper case of obviousness has not been established in the outstanding Office Action.

Thus, Applicant respectfully traverses this rejection.

Independent Claim 46

Claim 46 recites (with emphasis added):

> 46.   A storage system, comprising:
> *a first iSCSI controller*; and
> *a second iSCSI controller*, the second iSCSI controller coupled to
> the first iSCSI controller, the first iSCSI controller configured to receive
> an I/O request over a network, wherein responsive to the second iSCSI
> controller detecting a failure of the first iSCSI controller, the second iSCSI
> controller assumes the network address of the first iSCSI controller,
> identifies to a server that the second iSCSI controller has assumed the
> network address of the first iSCSI controller, receives the I/O request
> resent from the server, and writes or reads data corresponding to the resent
> I/O request to or from a storage system.

Applicant respectfully submits that the combination of references does not disclose, teach, or

suggest at least the emphasized claim features. As explained above, *Davis* does not disclose

iSCSI controllers. *Judd* does not remedy this deficiency. Thus, Applicant respectfully submits

that the combination of references fails to disclose, teach, or suggest at least the emphasized

claim features, and respectfully requests that the rejection to independent claim 46 be

withdrawn.

Independent Claim 47

Claim 47 recites (with emphasis added):

> 47.   (Previously presented) A storage method, comprising:
> *receiving at a first TCP/IP network address a SCSI I/O request*;
> detecting whether the SCSI I/O request can be processed at the first
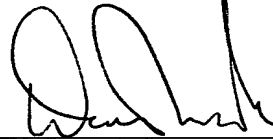> TCP/IP network address;

responsive to detecting that the SCSI I/O request cannot be processed at the first TCP/IP network address, assuming the first TCP/IP network address from a second TCP/IP network address;

identifying to a server the assumption of the first TCP/IP network address from the second TCP/IP network address;

receiving the SCSI I/O request resent from the server; and

writing or reading data corresponding to the resent SCSI I/O request to or from a storage system.

Applicant respectfully submits that the combination of references does not disclose, teach, or suggest at least the emphasized claim features. As explained above, *Davis* does not disclose ***receiving at a first TCP/IP network address a SCSI I/O request***. *Judd* does not remedy this deficiency. Thus, Applicant respectfully submits that the combination of references fails to disclose, teach, or suggest at least the emphasized claim features, and respectfully requests that the rejection to independent claim 47 be withdrawn.

CONCLUSION

For at least the reasons set forth above, Applicant respectfully submits that all rejections and objections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 20, 23-29, 32-35, 38-44, and 46-48 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

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